M301 Power and Grounding for Distributed Control Systems

Course Description

Course Duration
The duration is 5 days.

Course Goal
The goal of the course is to provide a basic understanding of Power and Grounding.

Student Profile
Anyone responsible for Process control system maintenance or system tuning

Prerequisites and Recommendations
A basic understanding of AC and DC circuit fundamentals and low voltage power systems

Description
This course reviews AC and DC circuit fundamentals, AC power and grounding problems and solutions, and the enhanced power requirements for sensitive electronic equipment. Lab exercises give students the opportunity to identify power problems using specialized test equipment.

Course Objectives
Upon completion of this course, students will be able to:

- Identify power quality and power distribution problems
- Effectively ground sensitive electronic equipment
- Identify grounded and subgrounded power systems
- Properly implement power conditioners to resolve power problems
- Recognize a correctly installed building electrical distribution system.
- Differentiate between linear and non-linear electrical loads.
# Course Calendar - M301 Power and Grounding for Distributed Control Systems

<table>
<thead>
<tr>
<th>Day 1</th>
<th>Day 2</th>
<th>Day 3</th>
<th>Day 4</th>
<th>Day 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Course Description</td>
<td>• Power Sensitive Electronics</td>
<td>• Interference</td>
<td>• Site Surveys</td>
<td>• Test</td>
</tr>
<tr>
<td>• Power Overview</td>
<td>• Power Problems</td>
<td></td>
<td>• System Maintenance</td>
<td>• Troubleshooting</td>
</tr>
<tr>
<td>• Electronic Equipment</td>
<td></td>
<td></td>
<td></td>
<td>• Course Summary</td>
</tr>
<tr>
<td>• AC &amp; DC Fundamentals</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Grounding Fact &amp; Fiction</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

[www.abb.com/abbuniversity](http://www.abb.com/abbuniversity)